

# REFERENCE NO.

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## PATENT ABSTRACTS OF JAPAN

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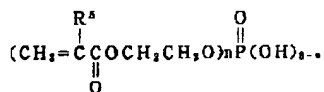
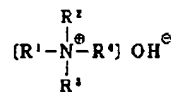
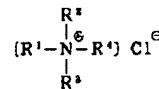
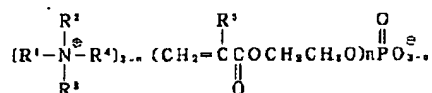
## (54) QUATERNARY AMMONIUM SALT

## (57) Abstract:

PURPOSE: To obtain a new quaternary ammonium salt usable as an active ingredient for washing-durable antistatic agents or antibacterial agents in synthetic fibers such as of polyester or nylon.

CONSTITUTION: A compound of formula I ( $R^1$  is an 8-18C alkyl;  $R^2$ - $R^4$  are each a 1-2C alkyl;  $R^5$  is H or methyl; (n) is 1 or 2). The compound is obtained by reaction of a quaternary ammonium chloride of formula II (e.g. dodecyltrimethylammonium chloride) with an alkali hydroxide (e.g. NaOH) to form a quaternary ammonium base of formula III, which is then neutralized by a compound of formula IV (e.g. 2-methacryloyloxyethyl acid phosphate).

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